

NIH Global Health Interest Group, Seminar Series

October 3, 2012

Seminar Title: Challenges & Controversies in Global health HIV Prevention

Presenter: Sten Vermund, M.D., Ph.D., Director of the Institute for Global Health, Vanderbilt University

In today's seminar, Dr. Vermund who was at NIH from 1988-1994 and is now at Vanderbilt University, explained to us his background and professional progression from working on HIV and HPV and how cervical disease acceleration in HIV+ women led to a change in the AIDS definition/criteria. Dr. Vermund quickly walked us through the general HIV statistics of burden (34 million people infected in 2011), incidence of 5 new infections every minute or 2.6 million per year. He views prevention as the elusive 'holy grail' that as we continue to calculate prevalence as the product of incidence and duration we come to the realization that incidence is not under control and that the saturation model of epidemics does not mean we have made progress on prevention. We need to recognize that there are special and high risk pools of groups when considering our classic epidemic theory and bioinformatics of disease.

Dr. Vermund talked about the CD4 count requirements and the long-lasting contention about when to start a patient on ART. The argument for treatment as prevention is a powerful one and Dr. Vermund went on to discuss some landmark studies that while adding evidence to the different treatments and prevention regimes, it is important to acknowledge that cellular and biochemical mysteries still persist in the acquisition, infection and proliferation of the HIV disease.

We are coming into a time where prophylaxis is now being used as a traditional method of reducing risk while long-term effects of ART/HIV therapies are being called into question as replication of trials show mixed results. Effective interventions such as needle or syringe exchange programs in coordination with ART-based care (such as demonstrated in HPTN-052, 065 and 071) as well as vaccines and correlates of infection as evidenced by the CHAVI Networks are important to engage.

Given Dr. Vermund's diverse background, his stress on the lessons learned from TB and other STI prevention and treatment strategies; he believes strongly that treatment is prevention and that through examples of PMTCT trials, HPTN052, and evidence from decrease viral load from early treatment, that with more coverage in the U.S. will certainly lead to optimal viral load suppression among all Americans who need care. The only questions remaining, it seems, is the new paradigm in prevention with respect to both HIV+ and HIV- patients. This seminar reminded us of the evolution of the HIV epidemic – the biological, social and epidemiologic challenges and events that have affected our world while discussing the different avenues we as researchers and members of the community believe to be best for addressing the national and international priorities of preventing new infections, addressing current infections aggressively and where the evidence points to in terms of effective and responsible solutions while enforcing the need for greater research and more innovative ideas to address lingering questions with substantial significance.

